Flight Procedure Tracking Form	Action: FLIGHT CHECK	Task Type: SID	Date Open: 07/29/2011	Task #: 2011072927634101001	Request #: 20110729276341
Procedure: SID WILSY (RNAV) ONE MAHNATTAN KS KMHK		Airport ID: KMHK	Airport: MANHATTAN RGNL		Reimbursable #:
City: MANHATTAN	ST: KS	GPS #:		Estimated Chart Date: 07/26/2012	FICO #: 1080516
Fac ID:	Fac. Type: Proc D	Specialist: PABLO ORTIZ			

Procedure Review

P1

	Rec'd	Rel'd	Full Name	Comments
Lead:	11/17/2011	04/18/2012	JILL OLSON	
QA:	04/18/2012	04/18/2012	SCOTT BEARD	DME / DME
Liaison:	04/18/2012		Alfonso	RESUBMIT 4/18/12 - DME/DME

Procedure Comments: ENROUTE **Remark Type:** INFORMATION

Pkg 1 of 1

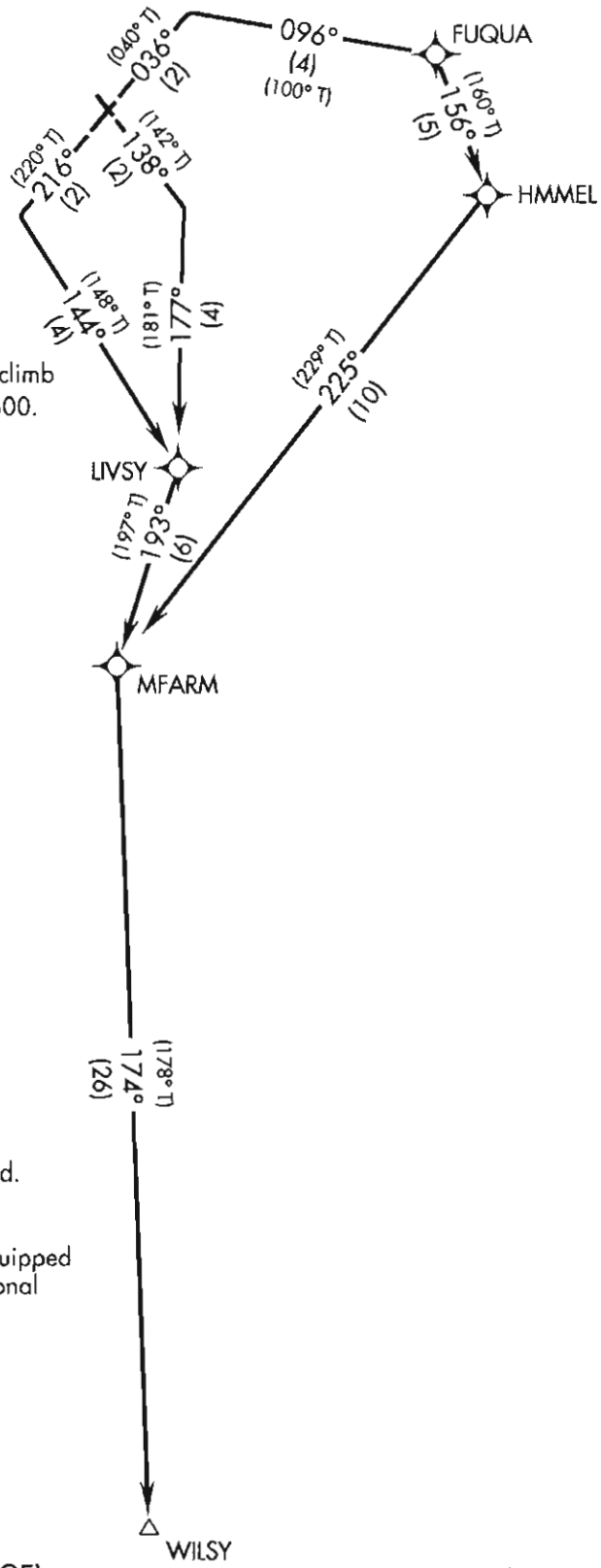
MANHATTAN, KS MANHATTAN RGNL (KMHK) WILSY ONE (RNAV) (SID) ENROUTE-YES FC: 5.29.12 PUB: 7.26.12

ATTACHED FORMS: 8260-15B; 8260-15C; 8260-2(S): FUQUA, ORIG; HMMEL, ORIG; LIVSY, ORIG; MFARM, ORIG; (INFO ONLY) WILSY-INT, REV 4.

CONTACT: JILL OLSON, AJV-353 LEAD, 405.954.9568:

WILSY ONE DEPARTURE (RNAV) SL-5241(FAA)

ASOS 119.075
CTAF 118.550
MHK GND CON 121.85
MHK ATCT★
118.55
MARSHALL AAF GCA
121.25 254.35



TAKE-OFF MINIMUMS:
Rwy 31: NA-Air Traffic.
Rwy 3, 13, 21: Standard with minimum climb of 500′ per NM until 1600.

FUQUA: N3908.917 / W9633.815
HMMEL: N3904.678 / W9631.865
LIVSY: N3903.970 / W9639.196
MFARM: N3858.022 / W9641.582
WILSY: N3832.171 / W9640.392

NOTE: DME/DME/IRU or GPS Required.
NOTE: RNAV 1
NOTE: RADAR Required.
NOTE: Takeoff Rwy 3: For non-GPS equipped aircraft MHK must be operational

PROTOTYPE: NOT FOR NAVIGATION

(NARRATIVE ON FOLLOWING PAGE)

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 3: Climb heading 036° to intercept course 096° to FUQUA, then on track 156° to HMMEL, then on track 225° to MFARM. thence....
TAKEOFF RWY 13: Climb heading 138° to intercept course 177° to LIVSY, then on track 193° to MFARM. thence....
TAKEOFF RWY 21: Climb heading 216° to intercept course 144° to LIVSY, then on track 193° to MFARM. thence....

...on track 174° to WILSY. Maintain 4000 or as assigned by ATC. Expect filed altitude ten minutes after departure.

TAKE-OFF OBSTACLES:

Rwy 3, Numerous trees beginning 20′ from DER, right and left of centerline, up to 100′ AGL/1395′ MSL

Rwy 13, Numerous trees beginning 1304′ from DER, right and left of centerline, up to 100′ AGL/1229′ MSL. Light pole, flood light, building, and elevator beginning 33′ from DER, 439′ left of centerline, up to 50′ AGL/1086′ MSL. Railroad 905′ from DER, 614′ right of centerline, 23′ AGL/1068′ MSL.

Rwy 21, Numerous trees beginning 2350′ from DER, right and left of centerline, up to 100′ AGL/1169′ MSL. Pole 4928′ from DER, 1006′ right of centerline, 41′ AGL/1189′ MSL. Pole 3593′ from DER, 462′ right of centerline, 41′ AGL/1189′ MSL. Pole 3993′ from DER, 461′ right of centerline, 41′ AGL/1158′ MSL.

Rwy 31, Numerous trees beginning 164′ from DER, right and left of centerline, up to 100′ AGL/1358′ MSL. Pole 4928′ from DER, 1006′ right of centerline, 41′ AGL/1189′ MSL. Utility pole 1290′ rom DER, 435′ right of centerline, 25′ AGL/1124′ MSL.

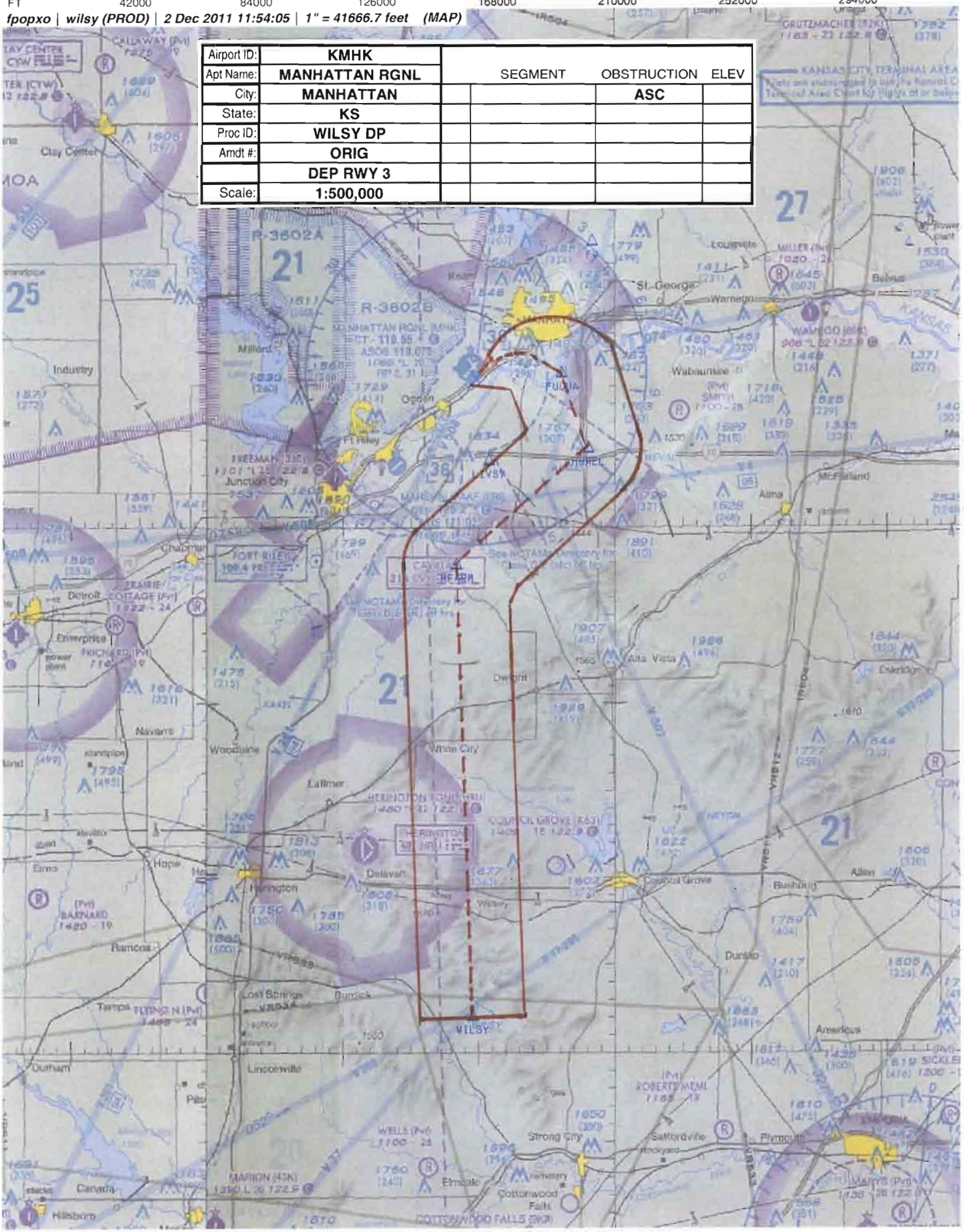
PROTOTYPE: NOT FOR NAVIGATION

NM 7 14 21 28 35 42 49

FT 42000 84000 126000 168000 210000 252000 294000

fpopxo | wilsy (PROD) | 2 Dec 2011 11:54:05 | 1" = 41666.7 feet (MAP)

Airport ID:	KMHK				
Apt Name:	MANHATTAN RGNL		SEGMENT	OBSTRUCTION	ELEV
City:	MANHATTAN			ASC	
State:	KS				
Proc ID:	WILSY DP				
Amdt #:	ORIG				
	DEP RWY 3				
Scale:	1:500,000				

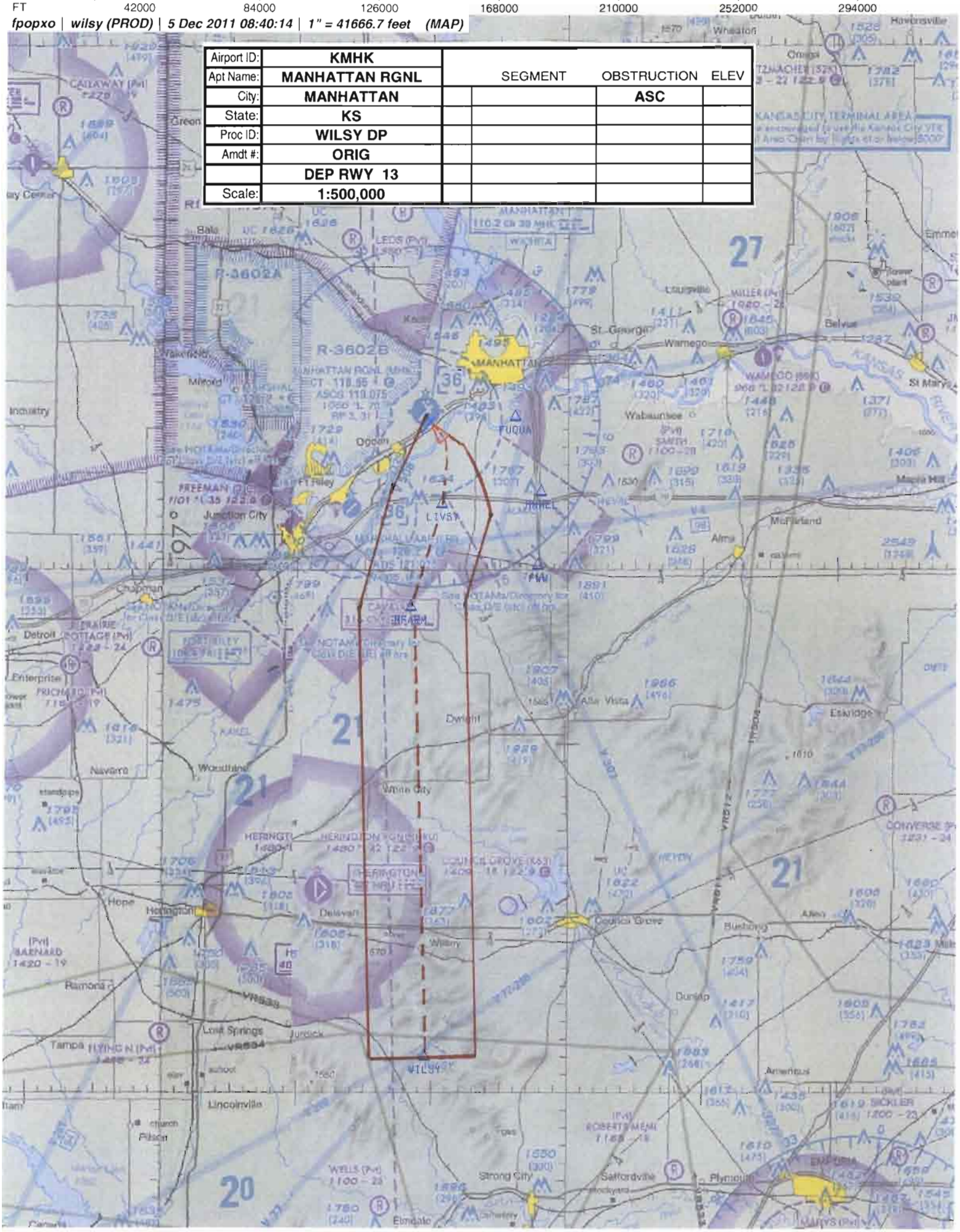


NM 7 14 21 28 35 42 49

FT 42000 84000 126000 168000 210000 252000 294000

fpopxo | wilsy (PROD) | 5 Dec 2011 08:40:14 | 1" = 41666.7 feet (MAP)

Airport ID:	KMHK				
Apt Name:	MANHATTAN RGNL		SEGMENT	OBSTRUCTION	ELEV
City:	MANHATTAN			ASC	
State:	KS				
Proc ID:	WILSY DP				
Amdt #:	ORIG				
	DEP RWY 13				
Scale:	1:500,000				

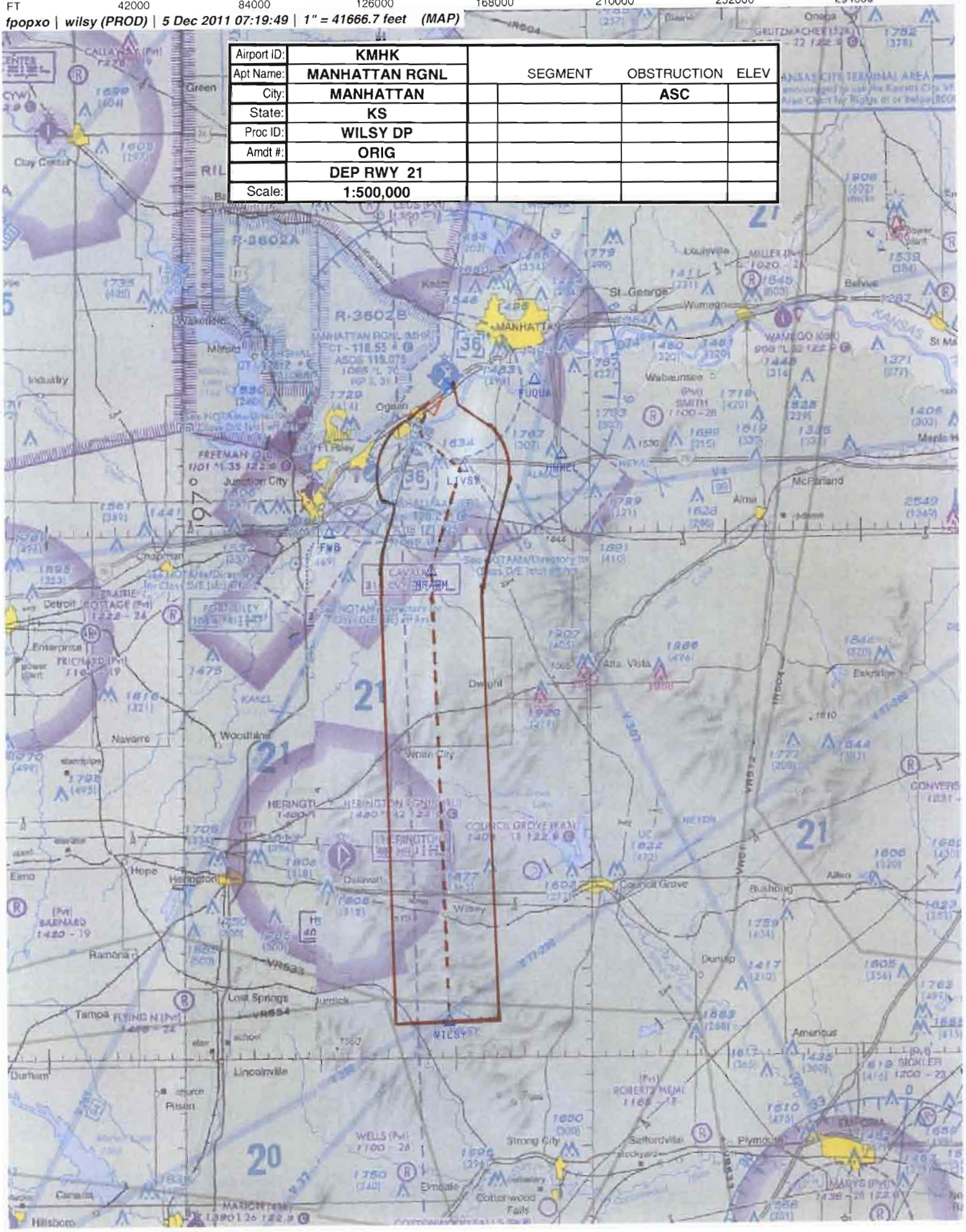


NM 7 14 21 28 35 42 49

FT 42000 84000 126000 168000 210000 252000 294000

fpopxo | wilsy (PROD) | 5 Dec 2011 07:19:49 | 1" = 41666.7 feet (MAP)

Airport ID:	KMHK				
Apt Name:	MANHATTAN RGNL		SEGMENT	OBSTRUCTION	ELEV
City:	MANHATTAN			ASC	
State:	KS				
Proc ID:	WILSY DP				
Amdt #:	ORIG				
	DEP RWY 21				
Scale:	1:500,000				

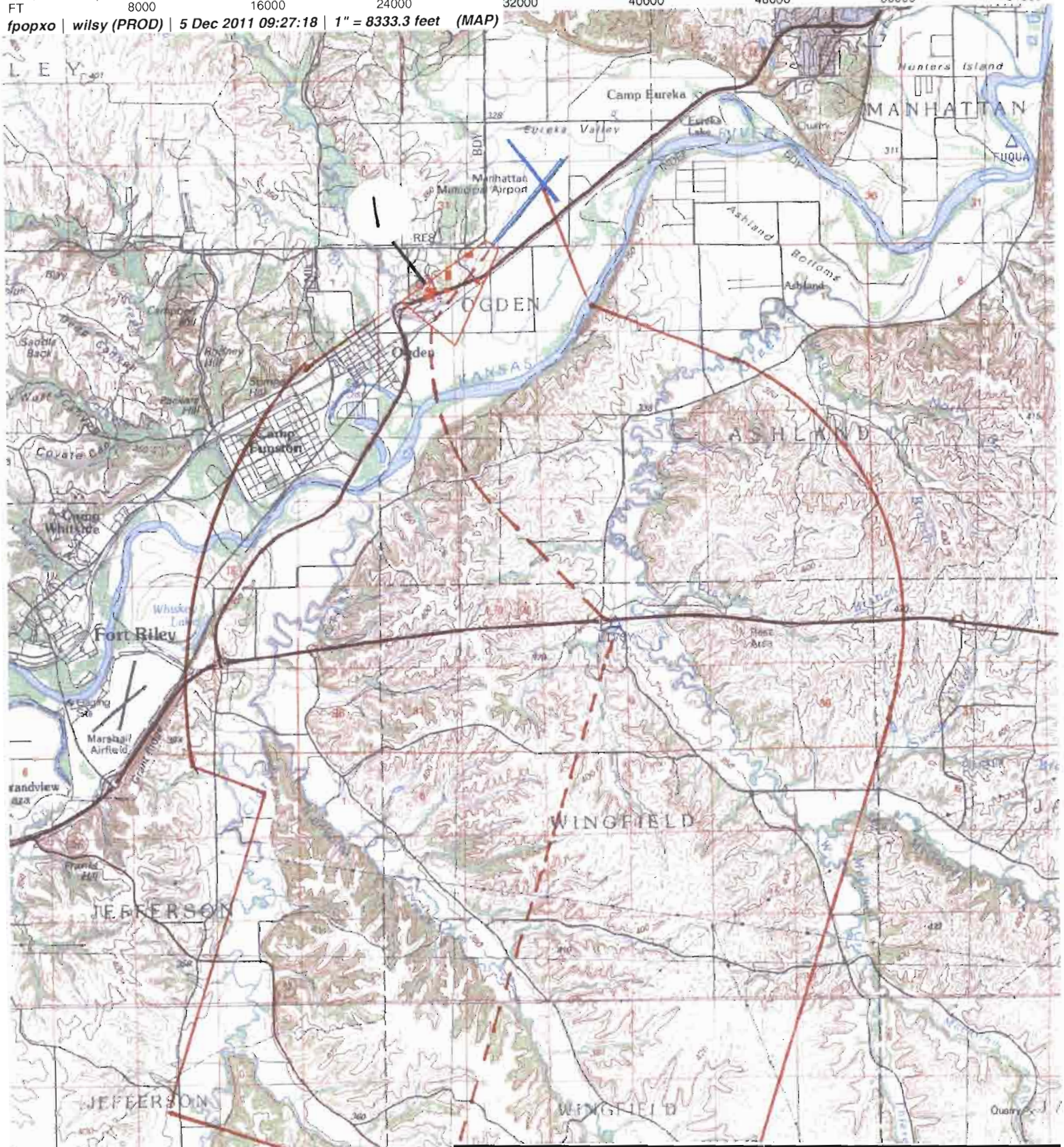


1194 TREE

NM 1 2 3 4 5 6 7 8 9 10

FT 8000 16000 24000 32000 40000 48000 56000 64000

fpopxo | wilsy (PROD) | 5 Dec 2011 09:27:18 | 1" = 8333.3 feet (MAP)



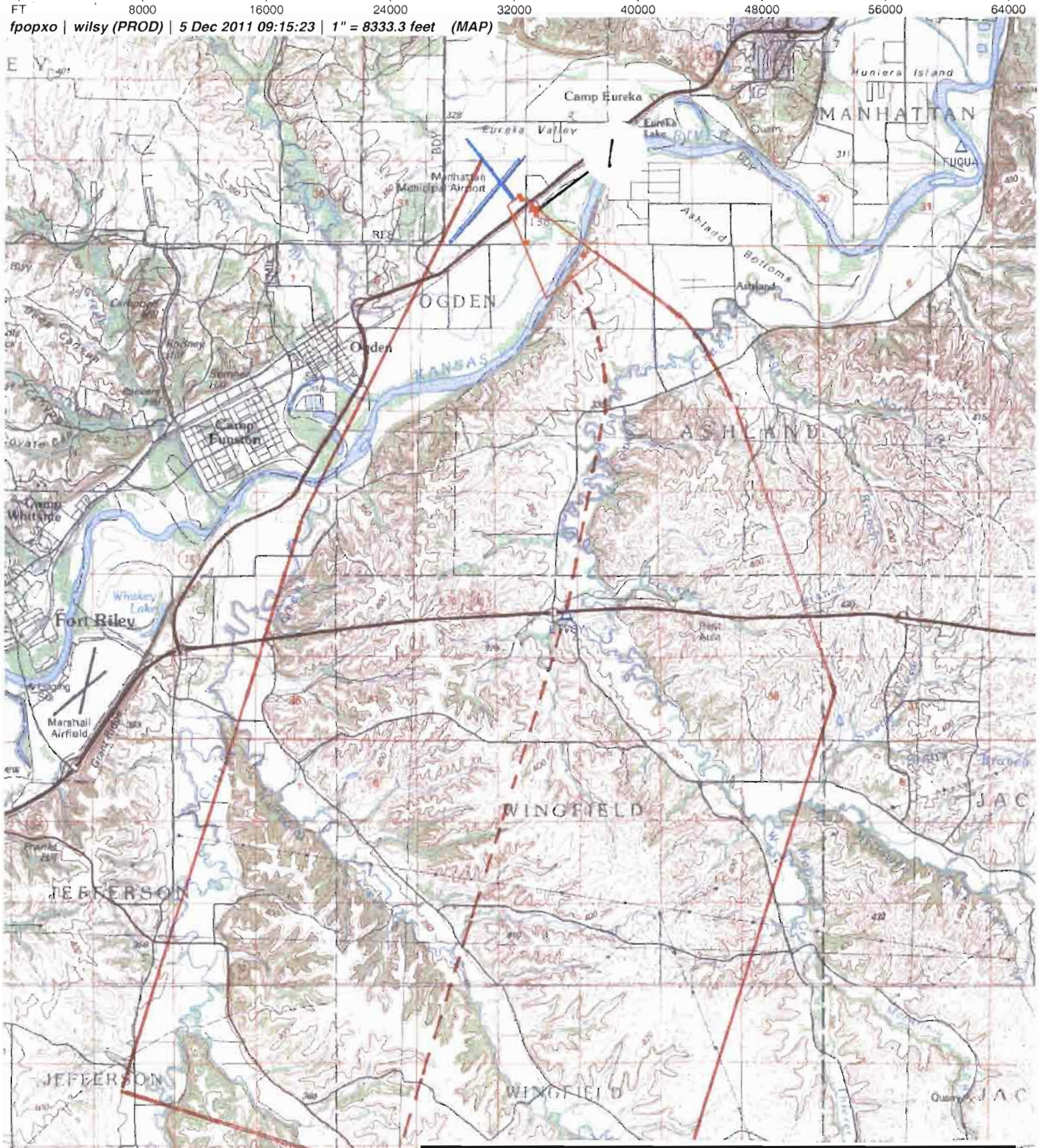
Airport ID:	KMHK				
Apt Name:	MANHATTAN RGNL		SEGMENT	OBSTRUCTION	ELEV
City:	MANHATTAN	1.	LOW CLOSE-IN	TREE	1194
State:	KS				
Proc ID:	WILSY DP				
Amdt #:	ORIG				
	DEP RWY 21				
Scale:	1:100,000				

1138 TREE

NM 1 2 3 4 5 6 7 8 9 10

FT 8000 16000 24000 32000 40000 48000 56000 64000

fpopxo | wilsy (PROD) | 5 Dec 2011 09:15:23 | 1" = 8333.3 feet (MAP)



Airport ID:	KMHK				
Apt Name:	MANHATTAN RGNL		SEGMENT	OBSTRUCTION	ELEV
City:	MANHATTAN	1.	LOW CLOSE-IN	TREE	1138
State:	KS				
Proc ID:	WILSY DP				
Amdt #:	ORIG				
	DEP RWY 13				
Scale:	1:100,000				

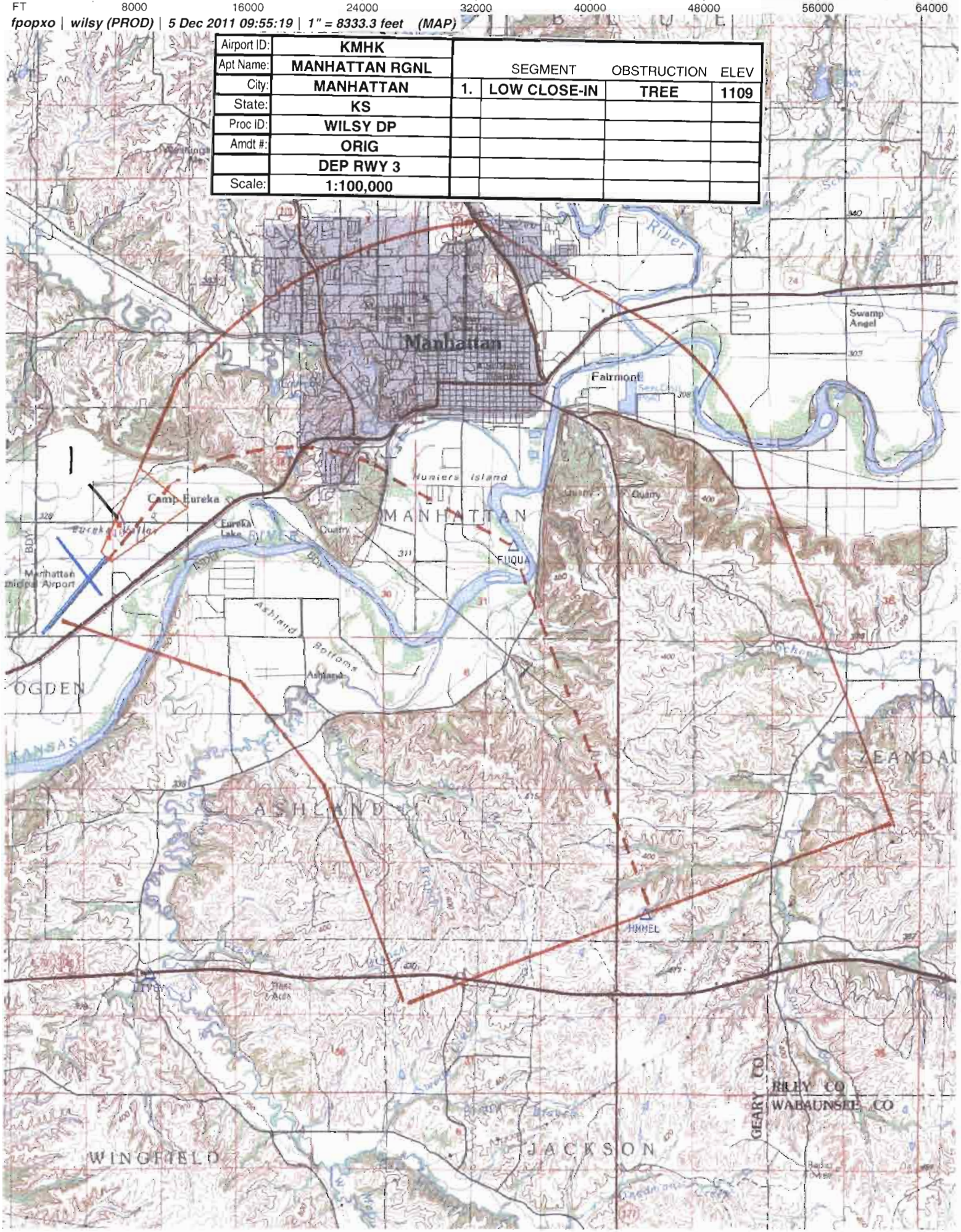
1109 TREE

NM 1 2 3 4 5 6 7 8 9 10

FT 8000 16000 24000 32000 40000 48000 56000 64000

fpopxo | wilsy (PROD) | 5 Dec 2011 09:55:19 | 1" = 8333.3 feet (MAP)

		SEGMENT	OBSTRUCTION	ELEV
Airport ID:	KMHK			
Apt Name:	MANHATTAN RGNL			
City:	MANHATTAN	1. LOW CLOSE-IN	TREE	1109
State:	KS			
Proc ID:	WILSY DP			
Amdt #:	ORIG			
	DEP RWY 3			
Scale:	1:100,000			



U.S. DEPARTMENT of TRANSPORTATION – FEDERAL AVIATION ADMINISTRATION

GRAPHIC DEPARTURE PROCEDURE (DP)

Bearings, headings, courses, tracks, and radials are magnetic. Elevation and altitudes are in feet MSL. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statue miles or feet RVR unless otherwise indicated. Graphic depictions attached.

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
WILSY	ONE	WILSY1.WILSY	NONE		

TYPE: RNAV SID

DP ROUTE DESCRIPTION:

TAKEOFF RUNWAY 3: CLIMB HEADING 035.91 TO INTERCEPT COURSE 095.84 TO FUQUA, THEN ON TRACK 156.27 TO HMMEL, THEN ON TRACK 224.76 TO MFARM. THENCE...
TAKEOFF RUNWAY 13: CLIMB HEADING 138.21 TO INTERCEPT COURSE 177.23 TO LIVSY, THEN ON TRACK 193.39 TO MFARM. THENCE...
TAKEOFF RUNWAY 21: CLIMB HEADING 215.92 TO INTERCEPT COURSE 144.16 TO LIVSY, THEN ON TRACK 193.39 TO MFARM. THENCE...

...ON TRACK 173.93 TO WILSY. MAINTAIN 4000 OR AS ASSIGNED BY ATC, EXPECT FILED ALTITUDE TEN MINUTES AFTER DEPARTURE.

TRANSITION ROUTES (GRAPHIC DEPICTION ONLY):

Transition Name	Transition Computer Codes	From FIX/NAVAID	To FIX/NAVAID	Course	Distance	MEA	MOCA	Crossing Altitudes/Fixes

PROCEDURAL DATA NOTES/TAKEOFF MINIMUMS:

PROCEDURAL DATA NOTES:
NOTE: DME/DME/IRU OR GPS REQUIRED.
NOTE: RNAV 1.
NOTE: RADAR REQUIRED.
NOTE: TAKEOFF RWY 3: FOR NON-GPS EQUIPPED AIRCRAFT MHK MUST BE OPERATIONAL.
TAKEOFF MINIMUMS:
RWY 31: NA - AIR TRAFFIC.
RWY 3, 13, 21: STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 1600.

TAKEOFF OBSTACLES NOTES:

NOTE: RWY 3, NUMEROUS TREES BEGINNING 20 FT FROM DEPARTURE END OF RUNWAY, RIGHT AND LEFT OF CENTER LINE, UP TO 100 FT AGL/1395 FT MSL.

NOTE: RWY 13, NUMEROUS TREES BEGINNING 1304 FT FROM DEPARTURE END OF RUNWAY, RIGHT AND LEFT OF CENTERLINE, UP TO 100 FT AGL/1229 FT MSL. LIGHT POLE, FLOOD LIGHT, BUILDING, AND ELEVATOR BEGINNING 33 FT FROM DEPARTURE END OF RUNWAY, 439 FT LEFT OF CENTERLINE, UP TO 50 FT AGL/1086 FT MSL. RAILROAD 905 FT FROM DEPARTURE END OF RUNWAY, 614 FT RIGHT OF CENTERLINE, 23 FT AGL/1068 FT MSL.

NOTE: RWY 21, NUMEROUS TREES BEGINNING 2350 FT FROM DEPARTURE END OF RUNWAY, RIGHT AND LEFT OF CENTERLINE, UP TO 100 FT AGL/1169 FT MSL. POLE 4928 FT FROM DEPARTURE END OF RUNWAY, 1006 FT RIGHT OF CENTERLINE, 41 FT AGL/1189 FT MSL. POLE 3593 FT FROM DEPARTURE END OF RUNWAY, 462 FT RIGHT OF CENTERLINE, 41 FT AGL/1189 FT MSL. POLE 3993 FT FROM DEPARTURE END OF RUNWAY, 461 FT RIGHT OF CENTERLINE, 41 FT AGL/1158 FT MSL.

CHECKED

GRAPHIC DEPARTURE PROCEDURE (DP)

Bearings, headings, courses, tracks, and radials are magnetic. Elevation and altitudes are in feet MSL. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statue miles or feet RVR unless otherwise indicated. Graphic depictions attached.

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
WILSY	ONE	WILSY1.WILSY	NONE		

NOTE: RWY 31, NUMEROUS TREES BEGINNING 164 FT FROM DEPARTURE END OF RUNWAY, RIGHT AND LEFT OF CENTERLINE, UP 100 FT AGL/1358 FT MSL. UTILITY POLE 1290 FT FROM DEPARTURE END OF RUNWAY, 435 FT RIGHT OF CENTERLINE, 25 FT AGL/1124 FT MSL.

CONTROLLING OBSTACLES:

RWY 3: 1395 MSL TREE, 390959.00N/0963911.00W, 1425 ANT ON OIL TANK, 391002.39N/0963726.84W.
RWY 13: 1229 MSL TREE, 390732.06N/0963856.87W.
RWY 31: 1314 MSL TREE, 391000.77N/0964122.39W, 1358 MSL TREE, 391021.03N/0964135.21W.

LOST COMMUNICATIONS PROCEDURES:

STANDARD.

ADDITIONAL FLIGHT DATA:

REFERENCE MAG VAR: KMHK 4E EPOCH YR: 2010.
DME/DME ASSESSMENT: SAT (RNP 1.0).
RECOMMENDED NAVAID: MHK VOR/DME 4E.

AIRPORTS SERVED:

MANHATTAN RGNL	MANHATTAN, KS

COMMUNICATIONS:

ASOS, CTAF, MHK GND CON, MHK ATCT, FRI GCA, ZKC

FIXES AND/OR NAVAIDS:

REMARKS:

QUALITY 1 CHECKED

U.S. DEPARTMENT of TRANSPORTATION – FEDERAL AVIATION ADMINISTRATION

GRAPHIC DEPARTURE PROCEDURE (DP)

Bearings, headings, courses, tracks, and radials are magnetic. Elevation and altitudes are in feet MSL. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statue miles or feet RVR unless otherwise indicated. Graphic depictions attached.

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
WILSY	ONE	WILSY1.WILSY	NONE		

FLIGHT INSPECTED BY:

REQUIRED EFFECTIVE DATE:
ROUTINE

DEVELOPED BY:
PABLO ORTIZ AJV-353 01/11/2012

APPROVED BY:
LARRY STROUT AJV-353

COORDINATED WITH:
ATA, ALPA, APA, AOPA, NBAA, FRI GCA, MHK ATCT, ZKC, AMGR

CHANGES:

ORIGINAL PROCEDURE.

REASONS:

ATC REQUEST.

04/17/12: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 1/11/12.
CHANGED ON TRACK 173.93 TO WILSY. MAINTAIN ALTITUDE ASSIGNED BY ATC, EXPECT FILED ALTITUDE TEN MINUTES AFTER DEPARTURE TO ON TRACK 173.93 TO WILSY. MAINTAIN 4000 OR AS ASSIGNED BY ATC, EXPECT FILED ALTITUDE TEN MINUTES AFTER DEPARTURE.

QUALITY 1 CHECKED

DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
WILSY RNAV	ONE	WILSY1.WILSY	NONE		

FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
RW03 (AER)	390753.58N/0964048.74W	N	-	-	-	-			
-	390936.84N/0963857.78W	-	-	VI	039.91	2.24			CG 500 FT PER NM TO 1600
FUQUA	390855.00N/0963348.90W	Y	FB	CF	099.84	4.06			RECOMMENDED NAVAID: MHK VOR/DME
HMMEL	390440.66N/0963151.89W	Y	FB	TF	160.27	4.50			VI/CF PERMITTED
MFARM	385801.30N/0964134.90W	Y	FB	TF	228.76	10.08			
WILSY	383210.24N/0964023.53W	Y	FB	TF	177.93	25.84			
RW13 (AER)	390859.63N/0964035.43W	N	-	-	-	-			
-	390729.72N/0963905.94W	-	-	VI	142.21	1.89			CG 500 FT PER NM TO 1600
LIVSY	390358.21N/0963911.76W	Y	FB	CF	181.23	3.52			RECOMMENDED NAVAID: MHK VOR/DME
MFARM	385801.30N/0964134.90W	Y	FB	TF	197.39	6.23			VI/CF PERMITTED
WILSY	383210.24N/0964023.53W	Y	FB	TF	177.93	25.84			
RW21 (AER)	390846.65N/0963951.74W	N	-	-	-	-			
-	390705.19N/0964140.71W	-	-	VI	219.92	2.20			CG 500 FT PER NM TO 1600
LIVSY	390358.21N/0963911.76W	Y	FB	CF	148.16	3.67			RECOMMENDED NAVAID: MHK VOR/DME
MFARM	385801.30N0964134.90W	Y	FB	TF	197.39	6.23			VI/CF PERMITTED
WILSY	383210.24N/0964023.53W	Y	FB	TF	177.93	25.84			

QUALITY CHECKED

DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
WILSY RNAV	ONE	WILSY1.WILSY	NONE		

ARINC PACKET - 424-18 - SID

```
                 1         2         3         4         5         6         7         8         9         0         1         2         3
NAVAID  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAD        MHK   K3011020VDTA N39084359W096400740    N39084359W096400740E0040010440     NARMANHATTAN

                 1         2         3         4         5         6         7         8         9         0         1         2         3
WP      123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAEAENRT   FUQUA K30    W     N39085500W096334890                      E0036     NAR           FUQUA
        SUSAEAENRT   HMMEL K30    W     N39044066W096315189                      E0036     NAR           HMMEL
        SUSAEAENRT   LIVSY K30    W     N39035821W096391176                      E0037     NAR           LIVSY
        SUSAEAENRT   MFARM K30    W     N38580130W096413490                      E0037     NAR           MFARM
        SUSAEAENRT   WILSY K30    R   L N38321024W096402353                      E0037     NAR           WILSY

                 1         2         3         4         5         6         7         8         9         0         1         2         3
AIRPORT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KMHKK3AMHK     0     070YHN39082700W096401500E004001066         1800018000C    MNAR    MANHATTAN RGNL

                 1         2         3         4         5         6         7         8         9         0         1         2         3
SEGMENT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KMHKK3DWILSY14RW03  010         0        VI                    0359                    18000
        SUSAP KMHKK3DWILSY14RW03  020FUQUAK3EA0E    010CF MHK K3      083800490958041D
        SUSAP KMHKK3DWILSY14RW03  030HMMELK3EA0E    010TF                    15630045
        SUSAP KMHKK3DWILSY14RW03  040MFARMK3EA0E    010TF                    22480101
        SUSAP KMHKK3DWILSY14RW03  050WILSYK3EA0EE   010TF                    17390258
        SUSAP KMHKK3DWILSY14RW13  010         0        VI                    1382                    18000
        SUSAP KMHKK3DWILSY14RW13  020LIVSYK3EA0E    010CF MHK K3      1674004817720035D
        SUSAP KMHKK3DWILSY14RW13  030MFARMK3EA0E    010TF                    19340062
        SUSAP KMHKK3DWILSY14RW13  040WILSYK3EA0EE   010TF                    17390258
        SUSAP KMHKK3DWILSY14RW21  010         0        VI                    2159                    18000
        SUSAP KMHKK3DWILSY14RW21  020LIVSYK3EA0E    010CF MHK K3      1674004814420037D
        SUSAP KMHKK3DWILSY14RW21  030MFARMK3EA0E    010TF                    19340062
        SUSAP KMHKK3DWILSY14RW21  040WILSYK3EA0EE   010TF                    17390258

                 1         2         3         4         5         6         7         8         9         0         1         2         3
RUNWAY  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KMHKK3GRW03    0070000359 N39075358W096404874-0200    +0292001056000046150IIMHK1
        SUSAP KMHKK3GRW13    0050001382 N39085963W096403543-0400    +0259501066000041100V
        SUSAP KMHKK3GRW21    0070002159 N39084665W096395174+0200    +0288201043000050150R
```

QUALITY CHECKED

DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
WILSY RNAV	ONE	WILSY1.WILSY	NONE		

ARINC SUMMARY - 424-18 - SID

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	RW03		010		VI		FB		035.9()			
	RW03	FUQUA	020		CF		FB	1.0	095.8()	004.1		
	RW03	HMMEL	030		TF		FB	1.0	156.3()	004.5		
	RW03	MFARM	040		TF		FB	1.0	224.8()	010.1		
	RW03	WILSY	050		TF		FB	1.0	173.9()	025.8		
	RW13		010		VI		FB		138.2()			
	RW13	LIVSY	020		CF		FB	1.0	177.2()	003.5		
	RW13	MFARM	030		TF		FB	1.0	193.4()	006.2		
	RW13	WILSY	040		TF		FB	1.0	173.9()	025.8		
	RW21		010		VI		FB		215.9()			
	RW21	LIVSY	020		CF		FB	1.0	144.2()	003.7		
	RW21	MFARM	030		TF		FB	1.0	193.4()	006.2		
	RW21	WILSY	040		TF		FB	1.0	173.9()	025.8		

POINT DATA

WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
MHK	N390843.59	W0964007.40	N3908.727	W09640.123
FUQUA	N390855.00	W0963348.90	N3908.917	W09633.815
HMMEL	N390440.66	W0963151.89	N3904.678	W09631.865
LIVSY	N390358.21	W0963911.76	N3903.970	W09639.196
MFARM	N385801.30	W0964134.90	N3858.022	W09641.582
WILSY	N383210.24	W0964023.53	N3832.171	W09640.392
RW03	N390753.58	W0964048.74	N3907.893	W09640.812
RW13	N390859.63	W0964035.43	N3908.994	W09640.591
RW21	N390846.65	W0963951.74	N3908.778	W09639.862

RUNWAY DATA

RWY	THRESHOLD ELEVATION	TCH
RW03	01056	46
RW13	01066	41
RW21	01043	50

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: FUQUA **STATE:** KS **COUNTRY:** US

LATITUDE/LONGITUDE: 390855.00N/0963348.90W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	WILSY (RNAV)			KMHK	MANHATTAN	KS (US)

REQUIRED CHARTING: DP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 05/31/2012

DEVELOPED BY: **DATE:** 12/01/2011 **OFFICE:** AJV-353 **NAME:** PABLO ORTIZ

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZKC
ATC FACILITY: FRI GCA
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: HMMEL **STATE:** KS **COUNTRY:** US

LATITUDE/LONGITUDE: 390440.66N/0963151.89W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	WILSY (RNAV)			KMHK	MANHATTAN	KS (US)

REQUIRED CHARTING: DP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 05/31/2012

DEVELOPED BY: **DATE:** 12/01/2011 **OFFICE:** AJV-353 **NAME:** PABLO ORTIZ

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZKC
ATC FACILITY: FRI GCA
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: LIVSY **STATE:** KS **COUNTRY:** US

LATITUDE/LONGITUDE: 390358.21N/0963911.76W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	WILSY (RNAV)			KMHK	MANHATTAN	KS (US)

REQUIRED CHARTING: DP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 05/31/2012

DEVELOPED BY: **DATE:** 12/01/2011 **OFFICE:** AJV-353 **NAME:** PABLO ORTIZ

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZKC
ATC FACILITY: FRI GCA
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: MFARM **STATE:** KS **COUNTRY:** US

LATITUDE/LONGITUDE: 385801.30N/0964134.90W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	WILSY (RNAV)			KMHK	MANHATTAN	KS (US)

REQUIRED CHARTING: DP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 05/31/2012

DEVELOPED BY: **DATE:** 12/01/2011 **OFFICE:** AJV-353 **NAME:** PABLO ORTIZ

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZKC
ATC FACILITY: FRI GCA
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: WILSY **STATE:** KS **COUNTRY:** US

LATITUDE/LONGITUDE: 383210.24N/0964023.53W **TYPE:** INT, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	WICHITA	ICT	VORTAC	H	035.00	042.00	64.07	64.07		5000	17500
2	EMPORIA	EMP	VORTAC	L	292.37	300.37		29.20		5000	17500

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
ICT	VORTAC	R-035	65	15900	17500

FIX RESTRICTIONS:
MRA ALL 5000

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
UPN	200	TOWER (20-001390)	384006.00N/0963729.00W	1877	1A

HOLDING RESTRICTIONS:
UNPLANNED HOLDING AUTHORIZED AT OR ABOVE 5000.

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	WILSY (RNAV)			KMHK	MANHATTAN	KS (US)
EN ROUTE	V280	1, 2				(US)
EN ROUTE	V77	1, 2				(US)
IAP	NDB RWY 17	1, 2		KHRU	HERINGTON	KS (US)
IAP	NDB RWY 35	1, 2		KHRU	HERINGTON	KS (US)

REQUIRED CHARTING: SECTIONAL, IAP, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 4 **DATE OF REVISION:** 01/13/2011

REASON FOR REVISION:
UPDATED FAC 1 DME 64.10 TO 64.07 AND ADDED DIST FROM FAC 64.07 NM.
UPDATED FAC 2 MAG BRG 292.00 TO 292.37, TRUE BRG 300.00 TO 300.37, MRA 3000 TO 5000 AND ADDED DIST FROM FAC 29.20 NM.
UPDATED UNPLANNED HOLDING WORDING, MOVED FROM REMARKS TO HOLDING RESTRICTIONS AND ADDED CONTROLLING OBSTRUCTION DATA.
ADDED PRECIPITOUS TERRAIN EVALUATION COMPLETED TO REMARKS.
UPDATED FIX USE.
UPDATED REQUIRED CHARTING TO INCLUDE SECTIONAL.

DEVELOPED BY: **DATE:** 09/03/2010 **OFFICE:** AVN-120 **NAME:** PABLO ORTIZ

APPROVED BY: **DATE:** 11/16/2010 **OFFICE:** AVN-120 **NAME:** GREGORY YAMAMOTO

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: CEN
ARTCC: ZKC
ATC FACILITY:
OTHER:

QUALITY CHECKED

Name:	enanders
Project Name:	
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	4/17/2012 12:18:35 PM
Input File:	WILSY RW03 WILSY 201...
Databases:	AVNIS Date: 02/07/2012
	NFD Date: 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✔ Please Check **Flyability** Results
DME/DME	✔
Radars	✔
Comms	
TERPS	

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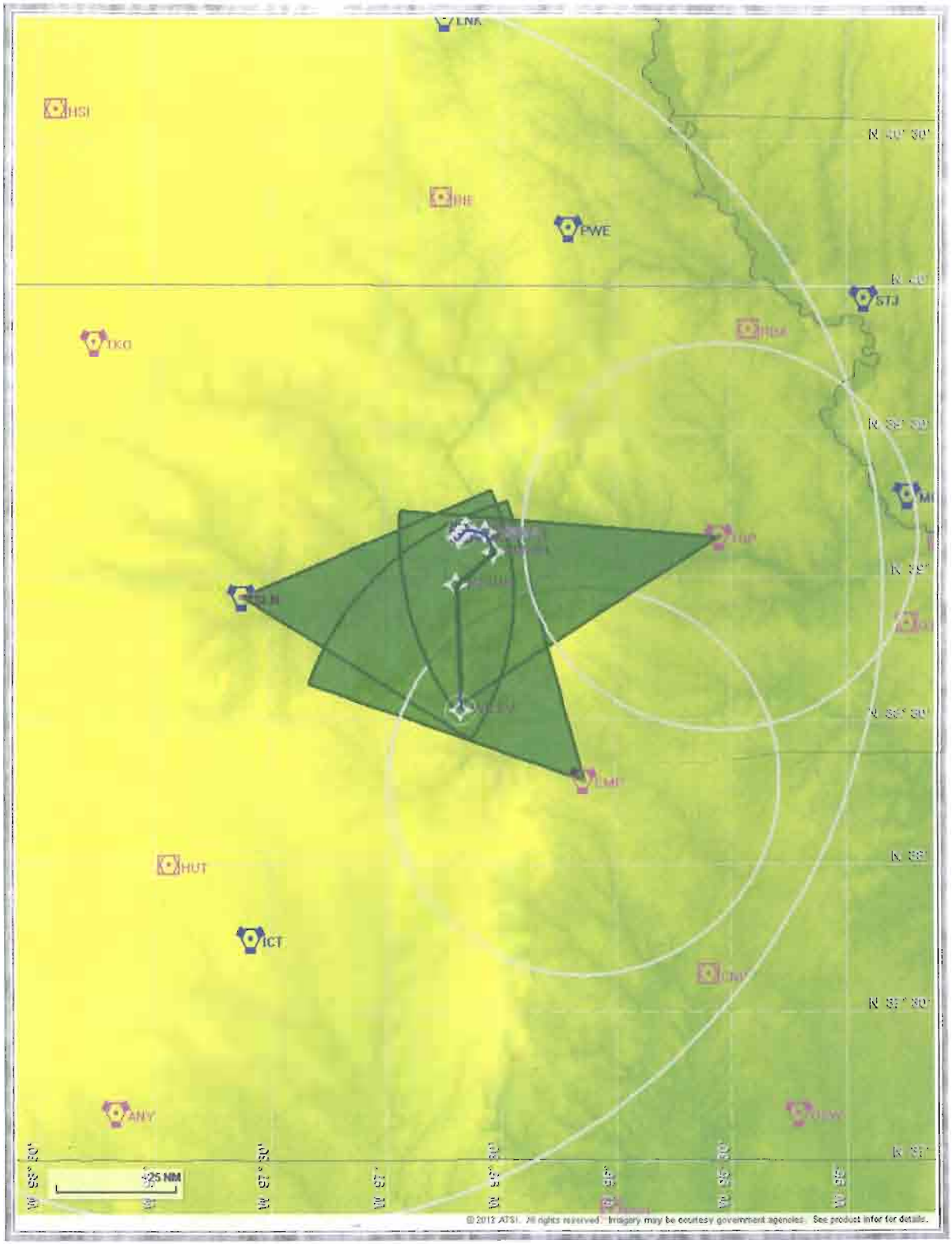
LNK
HSI
PWE
STJ
TKC
HUT
ICT
ANY
25 NM
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW03(A...	WP	N 39° 7' 53.58" W 96° 40' 48.74"	1055.9	VNAV	0.0	Fly By	TF
RW21(D...	WP	N 39° 8' 46.65" W 96° 39' 51.74"	1078.3	VNAV	130.0	Fly Over	VI
GR03:	WP	N 39° 9' 30.86" W 96° 38' 57.76"	1580.0	VNAV	145.0	Fly By	CF 99.8°
FUQUA	WP	N 39° 8' 55.00" W 96° 33' 48.90"	2393.4	VNAV	180.0	Fly By	TF
DIMMELL	WP	N 39° 4' 40.66" W 96° 31' 51.89"	3293.2	VNAV	180.0	Fly By	TF
MFARM	WP	N 38° 58' 1.30" W 96° 41' 34.90"	4000.0	VNAV	180.0	Fly By	TF
WILSY	WP	N 38° 32' 10.24" W 96° 40' 23.53"	4000.0	VNAV	180.0	Fly Over	[illegible]

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KMHK
Aircraft Category: Cat D
Climb Gradient: *None assigned*
Ground Speeds:
Departure: **120.0** Kts out to 10.0 NM
Table:
200.0 Kts up to 29000.0 Ft
280.0 Kts up to 99100.0 Ft.
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Flight Track comes into contact with terrain. Minimum AGL along route was -109.38 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER.

DME/DME

Return To Summary

Settings:

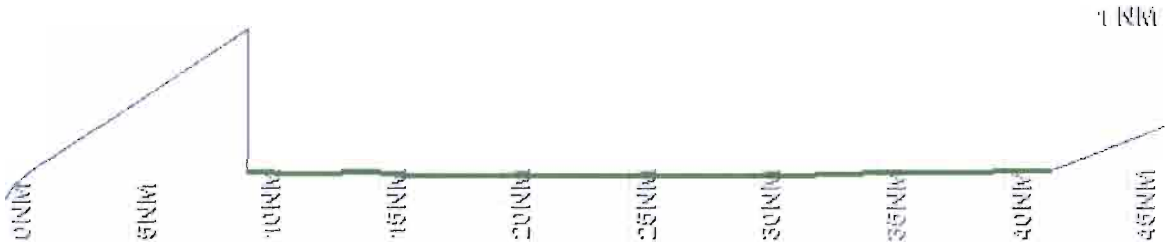
RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.165 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated
Minimum MSL DMEs Avail: 3047 Ft.

Total Number of DMEs Used: 4

Maximum DME Error: 0.874 NM.

No Critical DMEs were found.

Available DMEs: MHK, TOP, EMP, SLN



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	EMP	N 38° 17' 28.12" W 96° 8' 17.22"	L + ESV	User	NO	0.936	Enabled	25.5 %	27.1 %
2	TOP	N 39° 8' 13.60" W 95° 32' 56.80"	L + ESV	User	NO	0.947	Enabled	22.2 %	25.3 %
3	SLN	N 38° 55' 30.54" W 97° 37' 16.91"	L + ESV	User	NO	0.974	Enabled	38.0 %	43.9 %
4	MHK	N 39° 8' 43.09" W 96° 40' 7.40"	L	Database	NO	0.874	Enabled	34.7 %	42.1 %

Flight Check DME Selection

Distance [NM]	Selected DMEs				Alternate
0.0					
1.2					
1.9	MHK				
5.9	MHK	TOP	EMP		
10.3	MHK	TOP	EMP	SLN	
19.9	MHK	TOP	EMP	SLN	

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 39° 7' 53.58" W 96° 40' 48.74"	N 39° 5' 40.26" W 96° 32' 19.16"	9.7
	VOR: FRI	Available from N 39° 7' 53.58" W 96° 40' 48.74" to N 39° 5' 40.26" W 96° 32' 19.16"	
	VOR: MHK	Available from N 39° 7' 53.58" W 96° 40' 48.74" to N 39° 5' 40.26" W 96° 32' 19.16"	
2	N 38° 36' 45.25" W 96° 40' 36.16"	N 38° 32' 11.82" W 96° 40' 23.60"	4.6
	VOR: EMP	Available from N 38° 36' 45.25" W 96° 40' 36.16" to N 38° 32' 11.82" W 96° 40' 23.60"	
	VOR: FRI	Available from N 38° 36' 45.25" W 96° 40' 36.16" to N 38° 32' 11.82" W 96° 40' 23.60"	
	VOR: MHK	Available from N 38° 36' 45.25" W 96° 40' 36.16" to N 38° 32' 11.82" W 96° 40' 23.60"	

DME/DME (Continued.)

Return To Summary

User DMEs

#	Name	Lat/Lon	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	SLN	N 38° 55' 30.54" W 97° 37' 16.91"	H	1310.0	117.10	SLN	Used
		ESV: Bearing [True]: 66.0° to 122.0° Bearing [Mag]: 59.0° to 115.0°			Arc Distance: Out to 55.0 NM Altitude: 3000.0 to 14500.0 Ft.		
2	EMP	N 38° 17' 28.12" W 96° 8' 17.22"	L	1220.0	112.80	EMP	Used
		ESV: Bearing [True]: 290.0° to 345.0° Bearing [Mag]: 282.0° to 337.0°			Arc Distance: Out to 60.0 NM Altitude: 3000.0 to 18000.0 Ft.		
3	TOP	N 39° 8' 13.60" W 95° 32' 56.80"	L	1070.0	117.80	TOP	Used
		ESV: Bearing [True]: 237.0° to 275.0° Bearing [Mag]: 232.0° to 270.0°			Arc Distance: Out to 65.0 NM Altitude: 3000.0 to 18000.0 Ft.		

Radar Analysis

Return To Summary

Settings: Radar Types: ARSR and ASR

Name:	enanders
Project Name:	
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	4/17/2012 12:22:17 PM
Input File:	WILSY RW13 WILSY 201...
Databases:	AVNIS Date: 02/07/2012
	NFD Date: 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✔	Please Check **Flyability** Results
DME/DME	✔	
Radars	✔	
Comms		
TERPS		

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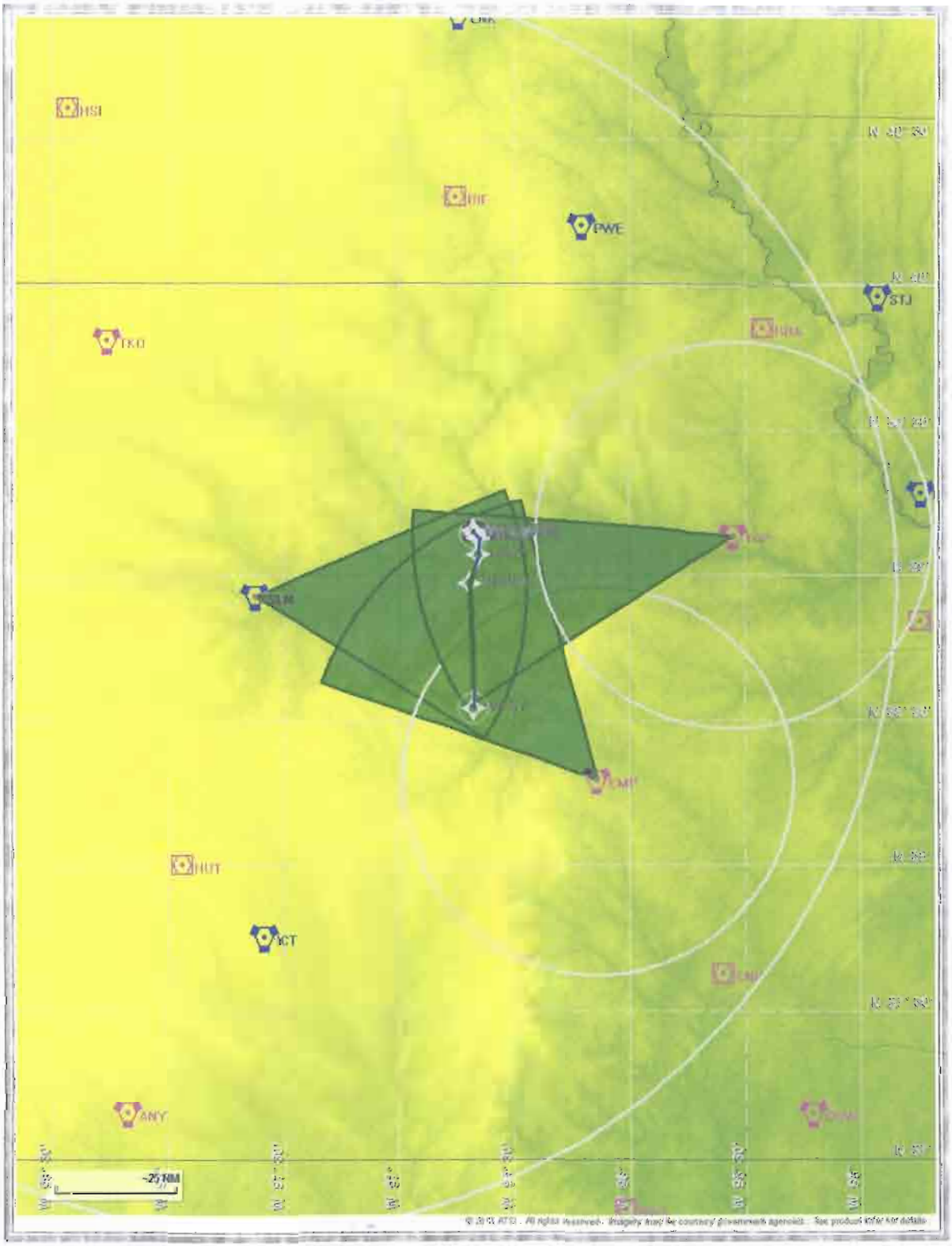

HSI
PWE
STJ
TKO
ICT
ANY
25 NM

Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW13(A...	WP	N 39° 8' 59.63" W 96° 40' 35.43"	1066.0	VNAV	0.0	Fly By	TF
RW31(D...	WP	N 39° 8' 20.58" W 96° 39' 56.55"	1079.6	VNAV	130.0	Fly Over	VI
GH13:	WP	N 39° 7' 29.70" W 96° 39' 5.92"	1530.0	VNAV	145.0	Fly By	CF - 181.2°
LIVSY	WP	N 39° 3' 58.21" W 96° 39' 11.76"	2284.6	VNAV	180.0	Fly By	TF
MFAKM	WP	N 38° 56' 1.30" W 96° 41' 34.90"	3530.0	VNAV	180.0	Fly By	TF
WILSY	WP	N 38° 32' 10.24" W 96° 40' 23.53"	4000.0	VNAV	180.0	Fly Over	TF

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KMHK
Aircraft Category: Cat D
Climb Gradient: *None assigned*
Ground Speeds:
Departure: 120.0 Kts out to 10.0 NM
Table:
200.0 Kts up to 20000.0 Ft.
280.0 Kts up to 99500.0 Ft.
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Required IAS at Fly-By WP MFARM could not be reached with given A/C acceleration performance.

Flight Track comes into contact with terrain. Minimum AGL along route was -42.92 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER.

DME/DME

Return To Summary

Settings:

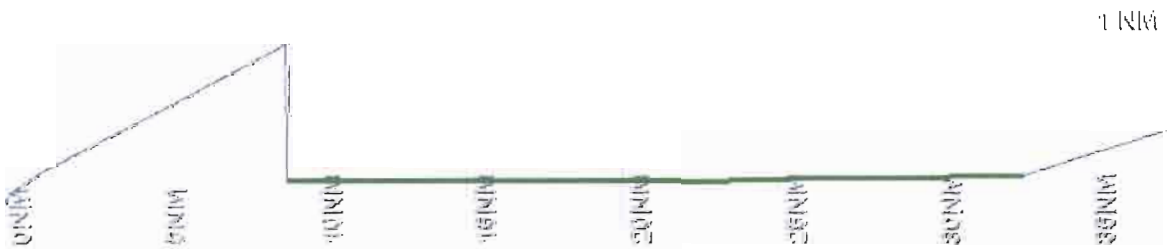
RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.165 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated
Minimum MSL DMEs Avail: 2994 Ft.

Total Number of DMEs Used: 4

Maximum DME Error: 0.838 NM

No Critical DMEs were found.

Available DMEs: MHK, SLN, EMP, TOP



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	SLN	N 38° 53' 30.54" W 97° 37' 16.91"	H + ESV	User	NO	0.838	Enabled	38.7 %	43.3 %
2	MHK	N 39° 8' 43.58" W 96° 40' 7.40"	T	Database	NO	0.830	Enabled	38.4 %	43.3 %
3	EMP	N 38° 17' 28.12" W 96° 8' 17.22"	L + ESV	User	NO	0.838	Enabled	15.9 %	20.0 %
4	TOP	N 39° 8' 13.60" W 95° 37' 56.80"	L + ESV	User	NO	0.838	Enabled	15.9 %	20.0 %

Flight Check DME Selection

Distance [NM]	Selected DMEs				Alternate
0.0					
0.0					
1.7	MHK				
5.2	MHK	SLN	EMP	TOP	
11.1	MHK	SLN	EMP	TOP	

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 39° 8' 59.63" W 96° 40' 35.43"	N 39° 0' 24.68" W 96° 40' 37.37"	9.1
	VOR: FRI	Available from N 39° 8' 59.63" W 96° 40' 35.43" to N 39° 0' 24.68" W 96° 40' 37.37"	
	VOR: MHK	Available from N 39° 8' 59.63" W 96° 40' 35.43" to N 39° 0' 24.68" W 96° 40' 37.37"	
2	N 38° 36' 45.15" W 96° 40' 36.07"	N 38° 32' 11.72" W 96° 40' 23.59"	4.6
	VOR: EMP	Available from N 38° 36' 45.15" W 96° 40' 36.07" to N 38° 32' 11.72" W 96° 40' 23.59"	
	VOR: FRI	Available from N 38° 36' 45.15" W 96° 40' 36.07" to N 38° 32' 11.72" W 96° 40' 23.59"	
	VOR: MHK	Available from N 38° 36' 45.15" W 96° 40' 36.07" to N 38° 32' 11.72" W 96° 40' 23.59"	

DME/DME (Continued.)

Return To Summary

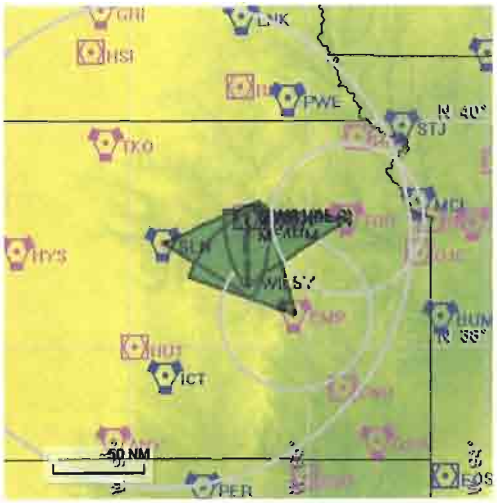
User DMEs

#	Name	Location	Range	Elevation (Ft)	Frequency	Replaces	Status
1	SLN	N 38° 55' 30.54" W 97° 37' 16.91"	L	1310.0	117.10	SLN	Used
		ESV: Bearing [True]: 16.0° to 122.0° Bearing [Mag]: 59.0° to 115.0°			Arc Distance: Out to 55.0 NM Altitude: 3000.0 to 14500.0 Ft.		
2	EMI	N 39° 17' 26.12" W 98° 8' 17.22"	L	1520.0	112.80	EMI	Used
		ESV: Bearing [True]: 290.0° to 345.0° Bearing [Mag]: 282.0° to 337.0°			Arc Distance: Out to 60.0 NM Altitude: 3000.0 to 18000.0 Ft.		
3	TOP	N 39° 8' 13.60" W 95° 32' 56.80"	L	1070.0	117.80	TOP	Used
		ESV: Bearing [True]: 237.0° to 275.0° Bearing [Mag]: 232.0° to 270.0°			Arc Distance: Out to 65.0 NM Altitude: 3000.0 to 18000.0 Ft.		

Radar Analysis

Return To Summary

Settings : Radar Types: ARSR an FASR



Name:	enanders
Project Name:	
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	4/17/2012 12:14:10 PM
Input File:	WILSY RW21 WILSY 201...
Databases:	AVNIS Date: 02/07/2012
	NFD Date: 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✔	**Please Check Flyability Results**
DME/DME	✔	
Radars	✔	
Comms	?	
TERPS	?	

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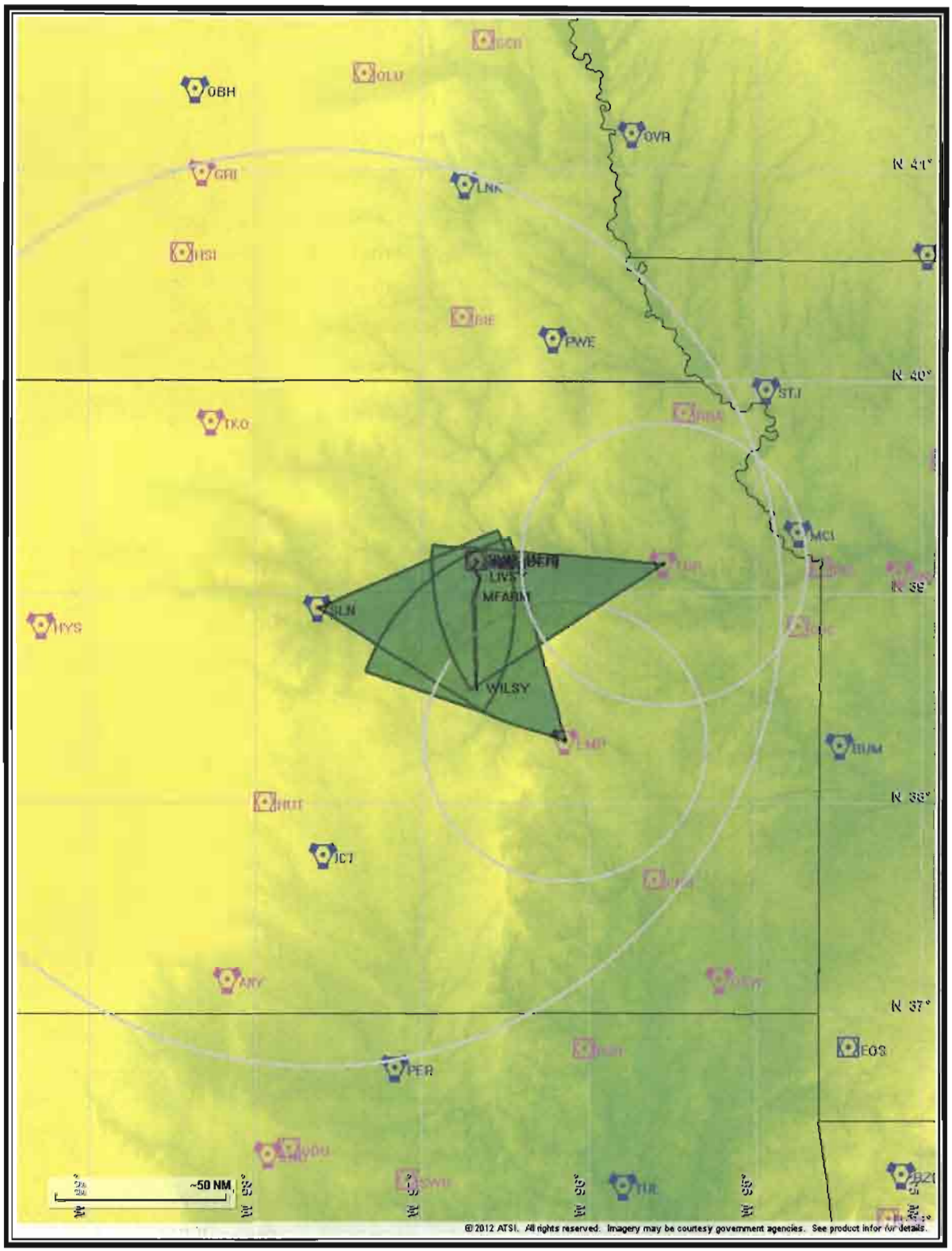
OBH
OLU
OVR
LNK
PWE
STJ
TKO
MCI
LIVS
MFARM
SLN
HYS
WILSY
BUM
ICT
ANY
PER
EOS
N 41°
N 40°
N 39°
N 38°
N 37°
~50 NM
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW21(A...	WP	N 39° 8' 46.65" W 96° 39' 51.74"	1043.3	VNAV	0.0	Fly By	TF
RW03(D...	WP	N 39° 7' 53.58" W 96° 40' 48.74"	1090.9	VNAV	130.0	Fly Over	VI
GH21:	WP	N 39° 7' 5.17" W 96° 41' 40.73"	1580.0	VNAV	145.0	Fly By	CF - 148.2°
LIVSY	WP	N 39° 3' 58.21" W 96° 39' 11.76"	2312.9	VNAV	180.0	Fly By	TF
MFARM	WP	N 38° 58' 1.30" W 96° 41' 34.90"	3558.3	VNAV	180.0	Fly By	TF
WILSY	WP	N 38° 32' 10.24" W 96° 40' 23.53"	4000.0	VNAV	180.0	Fly Over	TF

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KMHK
Aircraft Category: Cat D
Climb Gradient: *None assigned*
Ground Speeds:
Departure: **120.0 Kts** out to **10.0 NM**
Table:
200.0 Kts up to **29000.0 Ft.**
280.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Required IAS at Fly-By WP MFARM could not be reached with given A/C acceleration performance.

Flight Track comes into contact with terrain. Minimum AGL along route was -50.98 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER.

DME/DME

Return To Summary

Settings:

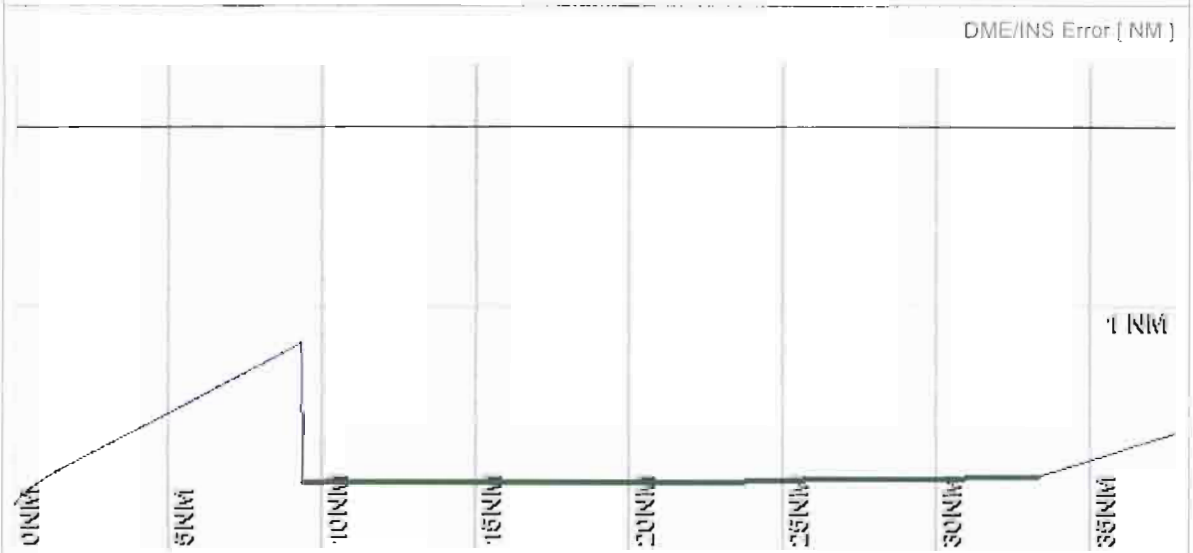
RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.165 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated
Minimum MSL DMEs Avail: 2990 Ft.

Total Number of DMEs Used: 4

Maximum DME Error: 0.852 NM.

No Critical DMEs were found.

Available DMEs: MHK, SLN, EMP, TOP



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	SLN	N 38° 55' 30.54" W 97° 37' 16.91"	H + ESV	User	NO	0.852	Enabled	38.4 %	43.2 %
2	MHK	N 39° 8' 43.59" W 96° 40' 7.40"	T	Database	NO	0.852	Enabled	38.4 %	43.2 %
3	EMP	N 38° 17' 28.12" W 96° 8' 17.22"	L + ESV	User	NO	0.852	Enabled	15.9 %	20.0 %
4	TOP	N 39° 8' 13.60" W 95° 32' 56.80"	L + ESV	User	NO	0.852	Enabled	15.9 %	20.0 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0						
1.2						
1.8	MHK					
5.5	MHK	SLN	EMP	TOP		
11.5	MHK	SLN	EMP	TOP		

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 39° 8' 46.65" W 96° 39' 51.74"	N 39° 0' 33.83" W 96° 40' 33.65"	9.3
	VOR: FRI	Available from N 39° 8' 46.65" W 96° 39' 51.74" to N 39° 0' 33.83" W 96° 40' 33.65"	
	VOR: MHK	Available from N 39° 8' 46.65" W 96° 39' 51.74" to N 39° 0' 33.83" W 96° 40' 33.65"	
2	N 38° 36' 43.28" W 96° 40' 35.99"	N 38° 32' 13.18" W 96° 40' 23.66"	4.5
	VOR: EMP	Available from N 38° 36' 43.28" W 96° 40' 35.99" to N 38° 32' 13.18" W 96° 40' 23.66"	
	VOR: FRI	Available from N 38° 36' 43.28" W 96° 40' 35.99" to N 38° 32' 13.18" W 96° 40' 23.66"	
	VOR: MHK	Available from N 38° 36' 43.28" W 96° 40' 35.99" to N 38° 32' 13.18" W 96° 40' 23.66"	

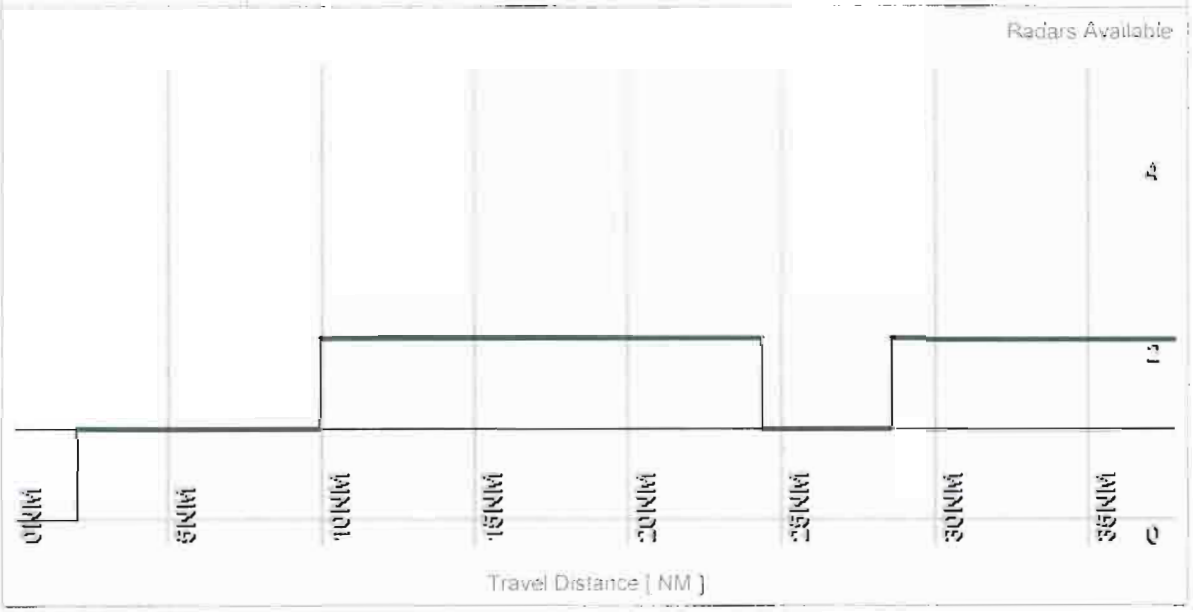
DME/DME (Continued.)

Return To Summary

User DMEs

#	Name	Lat/Lon	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	SLN	N 38° 55' 30.54" W 97° 37' 16.91"	H	1310.0	117.10	SLN	Used
		ESV:	Bearing [True]: 66.0° to 122.0° Bearing [Mag]: 59.0° to 115.0°		Arc Distance: Out to 55.0 NM Altitude: 3000.0 to 14500.0 Ft.		
2	EMP	N 38° 17' 28.12" W 96° 8' 17.22"	L	1220.0	112.80	EMP	Used
		ESV:	Bearing [True]: 290.0° to 345.0° Bearing [Mag]: 282.0° to 337.0°		Arc Distance: Out to 60.0 NM Altitude: 3000.0 to 18000.0 Ft.		
3	TOP	N 39° 8' 13.60" W 95° 32' 56.80"	L	1070.0	117.80	TOP	Used
		ESV:	Bearing [True]: 237.0° to 275.0° Bearing [Mag]: 232.0° to 270.0°		Arc Distance: Out to 65.0 NM Altitude: 3000.0 to 18000.0 Ft.		

Radar Analysis

Return To Summary

Settings: **Radar Types:** ARSR and ASR